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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,676	10/08/2003	Daniel Peter Ivkovich JR.	125054/11901 (21635-0110)	7687

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MCNEES WALLACE & NURICK LLC
100 PINE STREET
P.O. BOX 1166
HARRISBURG, PA 17108-1166

EXAMINER	
MAZUMDAR, SONYA	
ART UNIT	PAPER NUMBER
1791	
MAIL DATE	DELIVERY MODE
07/16/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/681,676	IVKOVICH ET AL.	
	Examiner	Art Unit	
	SONYA MAZUMDAR	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-22,25 and 26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1 and 5-20* is/are allowed.

6)☒ Claim(s) *21,22,25 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Cancellation of claims 2-4, 23, and 24 have been acknowledged.

2. Addition of claims 25 and 26 has been acknowledged.

Response to Arguments

3. Applicant's amendments, see page 2 in the remarks filed March 28, 2008, with respect to claim 1, have been fully considered, and the rejections of claim 1 and it's dependant claims have been withdrawn.

4. Applicant's amendments and arguments, see pages 5, 6, and 8 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Although Ross teaches applying a coating by chemical or physical vapor deposition as a line of sight deposition method, Ross also teaches applying a coating a final surface by many various well-known methods, such as a transfer method (column 1, line 42 - column 2, line 27). Furthermore, Conolly discloses a method of applying an optical coating by ways of a carrier to articles such as a combustion chamber wall for a

gas turbine engine (column 2, lines 7- 10, lines 36-39; column 3, lines 38-42 and lines 60-63).

Therefore, claims 21 and 22 stand rejected.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross (US 5,830,529) in view of Withington et al. (GB 2289866), Duchane et al. (US 4,481,999), Hankland (US 4,623,087), and Conolly (US 4,407,685).

Ross discloses method of applying coating to a substrate. The method includes providing a base, i.e. deposition substrate, constructed from disposable material such as water transfer type paper, which would dissolve in water. The base is coated with such materials that are metallic, reflective, holographic, or retroreflective, i.e. an optical coating, and includes a release coating, i.e. release system, such as water slide coating that will dissolve in water (column 9, line 66 - column 10, line 3; column 5, lines 41-63; column 18, lines 47-67; column 19, line 30; column 28, lines 38-39). An adhesive, i.e. bonding element, is applied to one surface of the coating for attachment of the coating from a base to a final or intermediate surface by heat and pressure (column 43, lines 35-43). If the coating is applied to the intermediate surface, the intermediate surface is used to reverse the orientation of the coating during transportation or transposition onto the final surface and the intermediate surface includes a transfer tape (column 38, lines 8-10). The coating may be applied by to a final surface by various well-known methods (column 1, line 42 - column 2, line 27), where a final surface includes brass, plaques, glass, or brick (column 23, lines 19-23; column 38, lines 1-22). It should be noted that Ross teaches two different release systems to accomplish the step of transferring an optical coating.

According to Applicant's specification, a release-and-transfer structure may be a polymeric releasable adhesive tape (paragraph 0013). Ross teaches that coatings,

known as release coatings, may be used (column 38, lines 21-22). Ross does not specifically teach a first release coating on a base which dissolves in water, however, Withington et al. teach using a backing with a water-soluble coating in a transfer process in applying a decal (page 3, 1st paragraph; page 4, 3rd paragraph).

It would have been obvious to one having ordinary skill in the art to use a water-soluble coating, such as Withington et al. taught, and one would have been motivated to do so to facilitate complete separation of an optical coating from a base by applying water.

Ross fails to teach an organic deposition substrate. Duchane et al disclose a method of forming a thin metal foil on a polyvinyl alcohol film and the alcohol film and metal coating are immersed together in a water bath to dissolve the alcohol film (column 4, lines 37-51; column 5, 34-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a polyvinyl alcohol substrate as taught by Duchane et al. to allow easier dissolution of itself for removal against the optical coating and to provide a 3-dimensional optical coating of any desired shape against the article (column 2, lines 10-12).

Also, Ross does not specifically teach heating and pressing to affixing the coating to the article. Hankland teaches a method of transferring an optical coating, which includes placing an composite of a carrier member with the optical coating and the article to be coated into an autoclave with an adhesive element as a component of

the article, then heating and pressing to cure the adhesive (column 3, lines 16-22, lines 43-46, and lines 54-61; column 4, lines 25-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide use an autoclave to affix a metal coating with heating and pressing as disclosed by Hankland to provide a method of coating surface such as curved surfaces in a one step process (column 1, lines 54-57).

Ross does not teach using a device substrate of a gas turbine engine. Conolly discloses a method of applying an optical coating by ways of a carrier to articles such as a combustion chamber wall for a gas turbine engine (column 2, lines 7- 10, lines 36-39; column 3, lines 38-42 and lines 60-63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an optical coating to a component of a gas turbine engine as disclosed by Conolly to provide a thermal barrier material to the engine components (column 2, lines 11-14).

7. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Withington et al., Duchane et al., Hankland, and Conolly.

Ross discloses method of applying coating to a substrate. The method includes providing a base, i.e. deposition substrate, constructed from disposable material such as water transfer type paper, which would dissolve in water. The base is pattern-coated (column 24, line 56 – column 25, line 9; Figures 4A and 4B) with such materials that are metallic, reflective, holographic, or retroreflective, i.e. an optical coating, and includes a release coating, i.e. release system, such as water slide coating that will dissolve in

water (column 9, line 66 - column 10, line 3; column 5, lines 41-63; column 18, lines 47-67; column 19, line 30; column 28, lines 38-39). An adhesive, i.e. bonding element, is applied to one surface of the coating for attachment of the coating from a base to a final or intermediate surface by heat and pressure (column 43, lines 35-43). If the coating is applied to the intermediate surface, the intermediate surface is used to reverse the orientation of the coating during transportation or transposition onto the final surface and the intermediate surface includes a transfer tape (column 38, lines 8-10). The coating may be applied by to a final surface by various well-known methods (column 1, line 42 - column 2, line 27), where a final surface includes brass, plaques, glass, or brick (column 23, lines 19-23; column 38, lines 1-22). It should be noted that Ross teaches two different release systems to accomplish the step of transferring an optical coating.

According to Applicant's specification, a release-and-transfer structure may be a polymeric releasable adhesive tape (paragraph 0013). Ross teaches that coatings, known as release coatings, may be used (column 38, lines 21-22). Ross does not specifically teach a first release coating on a base which dissolves in water, however, Withington et al. teach using a backing with a water-soluble coating in a transfer process in applying a decal (page 3, 1st paragraph; page 4, 3rd paragraph).

It would have been obvious to one having ordinary skill in the art to use a water-soluble coating, such as Withington et al. taught, and one would have been motivated to do so to facilitate complete separation of an optical coating from a base by applying water.

Ross fails to teach an organic deposition substrate. Duchane et al disclose a method of forming a thin metal foil on a polyvinyl alcohol film and the alcohol film and metal coating are immersed together in a water bath to dissolve the alcohol film (column 4, lines 37-51; column 5, 34-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a polyvinyl alcohol substrate as taught by Duchane et al. to allow easier dissolution of itself for removal against the optical coating and to provide a 3-dimensional optical coating of any desired shape against the article (column 2, lines 10-12).

Also, Ross does not specifically teach heating and pressing to affixing the coating to the article. Hankland teaches a method of transferring pieces of an optical coating, which includes placing an composite of a carrier member with the pieces and the article to be coated into an autoclave with an adhesive element as a component of the article, then heating and pressing to cure the adhesive (column 3, lines 16-22, lines 43-46, and lines 54-61; column 4, lines 25-33; column 6, lines 7-9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide use an autoclave to affix a metal coating with heating and pressing as disclosed by Hankland to provide a method of coating surface such as curved surfaces in a one step process (column 1, lines 54-57).

Ross does not teach using a device substrate of a gas turbine engine. Conolly discloses a method of applying an optical coating by ways of a carrier to articles such as a gas turbine engine having a curved surface, prior to the entire assembly is placed in a

metallic bag and the bag is placed in a furnace. (column 2, lines 7- 10, lines 36-39; column 3, lines 38-42 and lines 60-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an optical coating to a component of a gas turbine engine as disclosed by Conolly to provide a thermal barrier material to the engine components (column 2, lines 11-14).

Allowable Subject Matter

8. Claims 1 and 5 through 20 are allowed. There is no teaching found in the prior art of dissolving an aluminum release layer with a solvent comprising water, hydrochloric acid, and copper sulfate.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SONYA MAZUMDAR whose telephone number is (571)272-6019. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SM

/Philip C Tucker/
Supervisory Patent Examiner, Art Unit 1791